

WHAT IS CLAIMED IS:

1. A battery pack for an electronic device comprising:
 - at least one battery cell assembly;
 - an interface assembly cap having a size and shape for complementary engagement with one end portion of said battery cell assembly for providing an electrical connection means between said at least one cell and the electronic device, said interface assembly further providing an electrical connection to said at least one cell whether the battery pack is positioned within or outside the electronic device; and
 - a resin encasing said battery cell assembly.
2. The battery pack as defined in claim 1, wherein said resin further comprises a low temperature melting resin.
3. The battery pack as defined in claim 2, wherein said resin further comprises a polyamide.
4. The battery pack as defined in claim 1, further comprising a thin foil wrapped around said battery cell assembly.
5. The battery pack as defined in claim 4, wherein said thin foil further comprises an adhesive foil.
6. The battery pack as defined in claim 4, wherein said thin foil further comprises a non-metallic/non-conducting adhesive foil.
7. The battery pack as defined in claim 1, further comprising an end cap having a size and shape for complementary engagement with an end portion of said battery cell opposite said interface assembly end portion.

1 8. The battery pack as defined in claim 7, further comprising a low-temperature
2 melting resin encasing said end cap and said interface assembly cap.

1 9. The battery pack as defined in claim 8, wherein said interface assembly cap
2 further comprises electrical connection contacts for providing external access to positive
3 and negative voltage reference potentials.

1 10. The battery pack as defined in claim 9, wherein said voltage reference potential
2 contacts are positionally located in accordance with the positional locations of the
3 voltage reference potential contacts of the electronic device with which the battery pack
4 is used.

1 11. The battery pack as defined in claim 10, further comprising means for aligning
2 the battery pack when positioned within the electronic device.

1 12. The battery pack as defined in claim 1, wherein said at least one battery cell
2 assembly further comprises a flat cell.

1 13. The battery pack as defined in claim 1 for use in a cellular telephone.

1 14. A method for molding a battery pack for an electronic device comprising the
2 steps of:

3 providing at least one battery cell assembly having a desired shape and size and a
4 positive voltage potential terminal and a negative voltage potential terminal;

5 providing an electrically conductive means for interfacing between the battery
6 cell assembly and the electronic device;

7 electrically connecting the electrically conductive means to the battery cell
8 assembly wherein the positive voltage potential terminal is connected to the positive
9 voltage supply path of the electrically conductive means and the negative voltage

potential terminal is connected to the negative voltage supply path of the electrically conductive means;

placing the electrically conductive means and the battery cell assembly into a mold;

positioning and maintaining the electrically conductive means adjacent to and in contact with one end of the battery cell assembly;

closing the mold;

pouring a low temperature melting resin into the mold to encase the electrically conductive means and battery cell assembly; and

removing the thus molded battery pack from the mold.

15. The method as defined in claim 14, wherein the step of pouring further comprises pouring a polyamide.

16. The method as defined in claim 14, wherein the step of pouring further comprises pouring a polyurethane.

17. The method as defined in claim 14, further comprising the step of molding under low pressure.

18. The method as defined in claim 14, further comprising providing a flat battery cell assembly.

19. The method as defined in claim 14, wherein the step of providing an electrically conductive means further comprises providing a printed circuit board.

20. The method as defined in claim 14, wherein the step of providing an electrically conductive means further comprises providing a gold-plated nickel conductor.

1 21. The method as defined in claim 14, wherein the step of placing into a mold
2 further comprises placing into a metal mold.

1 22. A battery pack for a cellular telephone comprising:
2 at least one battery cell assembly having a desired shape and size and a positive
3 voltage potential terminal and a negative voltage potential terminal;
4 means defining an electrical conductive path for interfacing the battery cell
5 assembly and the cellular telephone, wherein the electrical conductive path means has a
6 positive voltage potential contact electrically connected to the battery cell assembly
7 positive voltage potential terminal and a negative voltage potential contact electrically
8 connected to the battery cell assembly negative voltage potential terminal, said positive
9 and negative voltage potential contacts located and positioned for contact with the
10 positive and negative voltage potential terminals of a cellular telephone with which the
11 battery pack is used; and
12 a resin encasing said battery cell assembly and said electrical conductive path
13 means to form a relatively thin wall molded battery pack.

1 23. The battery pack as defined in claim 22, wherein said resin further comprises a
2 low temperature melting resin.

1 24. The battery pack as defined in claim 23, wherein said resin comprises a
2 polyamide.

1 25. The battery pack as defined in claim 23, wherein said resin comprises a
2 polyurethane.

1 26. The battery pack as defined in claim 22, wherein said electrical path conductive
2 means further comprise charging control circuitry.

1 27. The battery pack as defined in claim 22, wherein said electrical path conductive
2 means further comprise battery cell voltage and current monitoring and status indication
3 circuitry.

1 28. The battery pack as defined in claim 22, wherein said electrical path conductive
2 means further comprise interfacing connection means between the battery cell and
3 charging control circuitry in the cellular telephone.

1 29. The battery pack as defined in claim 22, wherein said electrical path
2 conductive means further comprise interfacing connection means between the battery
3 cell and battery cell monitoring and status indication circuitry in the cellular
4 telephone.